

Notice of Allowability

Application No.

10/689,402

Examiner

Sharidan Carrillo

Applicant(s)

ZHANG ET AL.

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/23/2006.
2. ☒ The allowed claim(s) is/are 1-24 and 37.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



SHARIDAN CARRILLO
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Joseph Rossi on 7/25/2006.

The application has been amended as follows:

Cancel claims 34-36.

Claims 18-20, line 1, delete "process stream" and insert --process solution--

3. The following is an examiner's statement of reasons for allowance: The prior art fails to teach or suggest treating a post-CMP substrate with a surfactant having the formulas III, IVA, IVB, V, VI, VII, as recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. In an interview with Mr. Rossi on 7/25/2006, the examiner explained that claims 34-36 were not allowable and suggested cancellation of these claims in order to place the application in condition for allowance.

The examiner found applicant's arguments concerning the patentability of claims

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34-36 to be unpersuasive for the following reasons. Applicant argues that Kakizawa et al. (6310019) fail to teach a three component system, an aqueous solvent, a non-aqueous solvent, and the claimed surfactant. Specifically, applicant argues that the '019 patent teaches a quaternary ammonium compound. Applicant's arguments are not persuasive since the quaternary ammonium compound reads on applicant's claimed limitations of a non-aqueous solvent.

With respect to the prior art of Hsu, applicant argues that Hsu fails treating a post-CMP substrate. Applicant is directed to paragraph 1, which teaches CMP residues. Applicant further argues that Hsu teaches a non-HF producing fluoride salt as an essential ingredient, which is not required by applicant's claimed invention. Applicant's arguments are not persuasive since the non-ammonium producing salt is formulated into an aqueous solution, which reads on applicant's limitation of an aqueous solvent.

With respect to Zhang (6641986), the examiner made a typographical error and incorrectly cited the wrong patent number. The correct referenced document should be Zhang (2004/0029395). Applicant argues that Zhang et al. fail to teach a post-CMP substrate. Applicant is directed to paragraph 4 of Zhang. Therefore, for the above reasons, claims 34-36 were deemed unpatentable over the prior art of record.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Subawalla et al. teach processing semiconductors with acetylene diols.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-

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1297. The examiner can normally be reached on M-W 6:30-4:00pm, alternating Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc



SHARIDAN CARRILLO
PRIMARY EXAMINER